

### SM3H 7.4 odd answers

1.  $\frac{1}{2}$

3. 0

5. 1

7.  $(\frac{\pi}{4}, 0), (-\frac{\pi}{3}, 0)$

9.  $(\frac{7\pi}{12}, 0), (0, 0)$

11.  $(-\frac{4\pi}{3}, 3)$

13.  $(\frac{3\pi}{2}, 0)$

15. Amplitude: 1, Period:  $2\pi$

Frequency:  $\frac{1}{2\pi}$ , Phase shift: right  $\frac{\pi}{2}$

Range:  $[-1, 1]$

17. Amplitude: 3, Period:  $\frac{1}{2\pi}$

Frequency:  $2\pi$ , Phase shift: none

Range:  $[-3, 3]$

19. Amplitude: 1, Period:  $\frac{2\pi}{5}$

Frequency:  $\frac{5}{2\pi}$ , Phase shift: none

Range:  $[4, 6]$

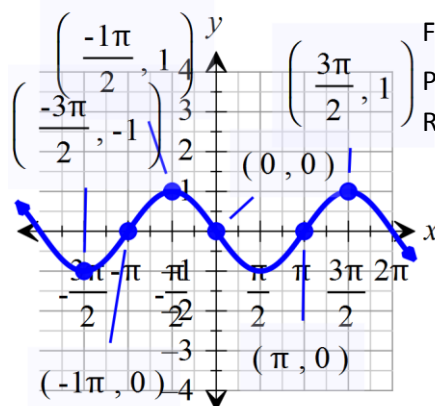
21. Amplitude: 1

Period:  $2\pi$

Frequency:  $\frac{1}{2\pi}$

Phase shift: none

Range:  $[-1, 1]$



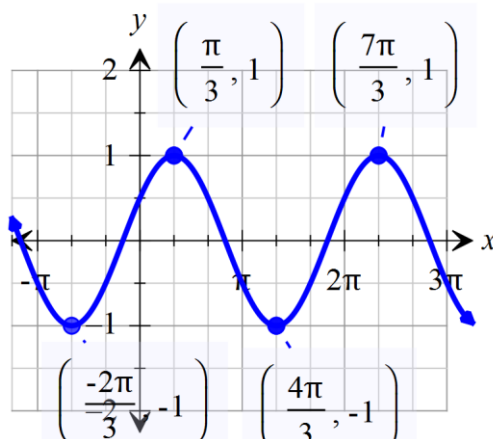
23. Amplitude: 1

Period:  $2\pi$

Frequency:  $\frac{1}{2\pi}$

Phase shift: right  $\frac{\pi}{3}$

Range:  $[-1, 1]$



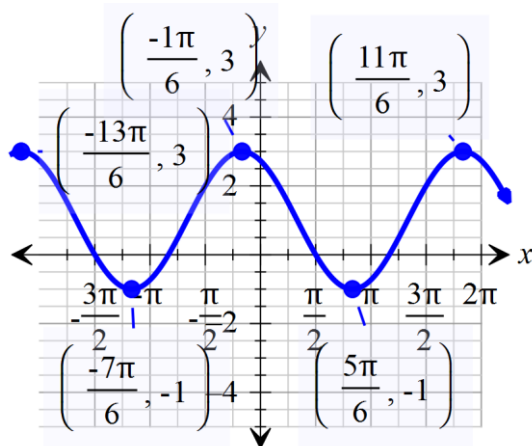
25. Amplitude: 2

Period:  $2\pi$

Frequency:  $\frac{1}{2\pi}$

Phase shift: left  $\frac{\pi}{6}$

Range:  $[-1, 3]$



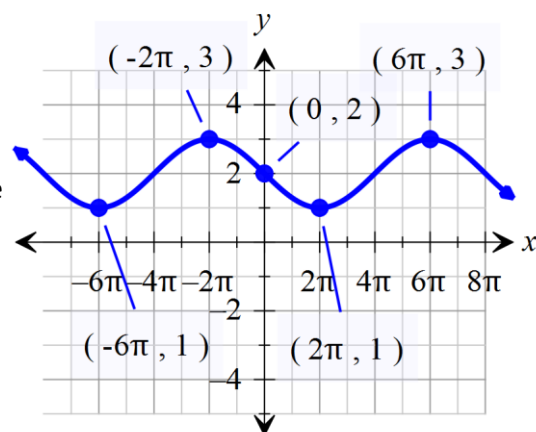
27. Amplitude: 1

Period:  $8\pi$

Frequency:  $\frac{1}{8\pi}$

Phase shift: none

Range:  $[1, 3]$



29.  $f(x) = 2 \sin\left(2\left(x - \frac{\pi}{4}\right)\right)$

31.  $freq = \frac{5}{2\pi}$   $per = \frac{2\pi}{5}$

33.  $y = 3 \sin(2x)$

35.  $y = 2 \sin\left(\frac{1}{2}(x + 1)\right)$

37.  $y = 2 \cos(2x) - 2$